Knife Fighting Stance, Footwork, and Dynamics of Motion

Knife Training Methods and Techniques for Martial Artists

Martina Sprague

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Book 5

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by Martina Sprague

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Disclaimer: Always use caution and never use real knives when practicing the martial arts exercises in this book. The reader assumes full responsibility for injuries incurred by doing the exercises described herein, and for the use or misuse of any information contained in this book. The author does not endorse the use of edged weapons as a means for resolving conflict. The instruction in this book is purely informational in purpose and intended to strengthen the martial artist's empty-hand skills.

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INTRODUCTION

Now that you have learned a bit about carrying, deploying, manipulating, and attacking with the knife, we will talk about stance and footwork as related to maneuvering into position for using your previously learned skills.

Stance and footwork give the martial artist the ability to control distance and protect vital areas against enemy attack. Stance and footwork give you control of the engagement, regardless of whether you are up against a knife-wielding or empty-handed fighter. Stance and footwork enable you to change the direction of the attack, flee, or evade an opponent's counterattack. Stance and footwork have a major effect on your safety. I caution against getting too fancy with the footwork, however. Remember that knife fighting is not like a "sparring match" in a controlled environment; it is not about exchanging blows. Your intent is to finish the fight with a single strike if possible.

The particular stance and footwork you use depends to an extent on the size and primary usage of the weapon. Some bigger fighting knives, such as the Nepalese kukri, are designed for heavy chopping and are capable of severing limbs with a single blow. These weapons are therefore extraordinarily difficult to defend against. The use of smaller knives, such as folders and certain daggers, require the use of good footwork to help the wielder attain a position that is beneficial for executing a quick stab or slash, or a series of stabs and slashes. Although the knife is a

touch weapon and a single stab or slash with a small knife can prove devastating, a single cut does not necessarily end the fight if aimed at a secondary target (as discussed in Book 4 of the *Knife Training Methods and Techniques for Martial Artists* series). If the opponent is prepared to meet the attack and also has a weapon, it complicates the situation even more.

As a general guideline when training with the knife, use linear footwork and direct attacks and single chops if wielding a bigger knife (kukri, Bowie, machete), and a combination of linear and circular footwork and combined stabs and slashes if using a smaller knife (folder, dagger). Regardless of the length and design of the weapon, practice seizing the initiative and pressing the attack to place your opponent on the defensive and in retreat. If you find it necessary to retreat to avoid an attack, be aware that it is very difficult to move back in a straight line at a speed faster than your opponent can advance.

As explained in Book 1, the *Knife Training Methods and Techniques for Martial Artists* series has three objectives: The first few books focus on getting to know the knife, its strengths and weaknesses, and on manipulating and using it. The next few books focus on defending against knife attacks. The last few books focus on implementing empty-hand martial arts skills into your knife training, and include scenario-based exercises intended to bring your knowledge into perspective and give you a solid understanding of your strengths and weaknesses when faced with a knife-wielding assailant. Each book starts with an introduction. You are then given the lesson objectives, along with detailed information and a number of training exercises aimed at making you physically and emotionally ready to participate in traditional martial arts demonstrations involving a knife or, if fate will have it, in a real encounter. Remember that it is your responsibility to

know and comply with all federal and local laws regarding the possession and carry of edged weapons. Ultimately, the purpose of this book series is to emphasize how tradition and culture have affected our views of the martial arts and bring increased understanding of the knife as a weapon of offense and defense, while simultaneously strengthening the martial artist's empty-hand skills.

BRIEF HISTORY

Footwork can be either linear or circular. For example, the art of fencing relies mainly on linear footwork, as does the art of medieval European swordsmanship, while the art of Asian sword fighting relies on a combination of linear and circular footwork which gives the sword wielder control of his or her opponent's weapon and the opportunity to enter his space at a favorable time. Despite these differences in footwork, the objective both in Europe and Asia is to seize the initiative and take control of the fight.

The distance to the target is another factor affecting stance and footwork. In a thrusting attack with a long weapon such as a fencing foil or bayonet, the wielder might lunge forward with his lead leg and thrust the weapon into his opponent. A drawback of the linear attack with the lunge is that it creates a wide stance, making a quick retreat or change of direction difficult. In a slashing attack with a long weapon such as a sword, the wielder can use a combination of linear and circular or lateral movement. A short weapon such as a knife permits even greater flexibility in stance and footwork.

The thrust with the knife in the forward grip, also called a fencing grip, resembles a fencer gaining reach for thrusting his foil into the target by lunging forward with his lead leg and keeping the rear foot planted. Note that a true fencer's lunge is wider than the stance pictured here. Image source: Martina Sprague.

In any combat situation with a knife, whether the weapon is used for thrusting or slashing, distance awareness is crucial and comes in part through training in stance and footwork. A reason why a good fencer is successful is because he or she focuses on a stabbing attack to a vital target and trains to achieve this objective with precision. When his weapon lands on target, also called a he is awarded a point. To achieve his objective, the sport fencer must train extensively in developing his footwork. Although fencing is linear and the contestants move only forward and back along the they learn to advance and retreat with speed. In other words, they have a keen sense of distance at all times. When deciding to attack, they do so when their opponent has little

opportunity to distance himself from the attack. An additional benefit of the fencer's thrust is that it relies on the shortest distance between the tip of the weapon and the target, which further equates to speed.

In a knife fight, the martial artist is not awarded a point for landing a blow on his or her opponent. As previously mentioned, a knife fight is not a sparring match. One good stab to a vital target should be all it takes, and when this stab lands the fight should be over. Some fighting knives, due to their design, don't lend themselves to the thrust, however. The the small claw-like knife of Indonesia, for example, is designed primarily for delivering devastating cuts and slashes at very close range. The curvature of the karambit is capable of creating a deep gash, particularly if the knife is employed in an upward ripping action for the purpose of disemboweling the opponent. A drawback is the knife's short reach, which limits it to exceptionally close range and makes it unsuitable for defense against an enemy combatant wielding a larger knife or sword. By contrast, the the famous combat knife of the Nepalese Gurkha, due to its curved shape and broad tip, is primarily a hacking weapon.

The Indonesian karambit, due to its short blade and claw-like design, is primarily a slashing weapon designed for disembowelment at very close range. Image source: Martina Sprague.

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The Nepalese kukri, due to its broad tip and forward weighted design, is primarily a hacking weapon. Image source: Martina Sprague.

Historical Gem: For the Nepalese Gurkhas (the notorious warriors who have served the British Crown in numerous wars), the typical cut is an overhead chop with the cutting edge facing downward at an approximate 60-degree angle. The knife is held firmly and the weight of the body is placed behind the blow. As the knife moves through the overhead arc toward the target, power is acquired by relying on bodyweight and momentum, or by striking from a slightly elevated position if possible. Since the blade is swung in a downward motion, the force of gravity naturally increases the power of the cut. The free hand is used to aid balance by stretching that arm slightly forward just prior to striking, while simultaneously keeping the hand away from the knife's trajectory.

The distance when striking should be such that the arms can move freely, which equates to two to three feet from the target. To avoid accidental self-inflicted injuries in case of a missed swing, the arc through which the knife travels should end further away than its starting point.

LESSON OBJECTIVES

Upon completion of this lesson, you should:

1. Have gained some insights into the benefits and drawbacks of different knife fighting stances

2. Have acquired an understanding of why you generally want to fight with the knife in your lead hand, yet have insight into rear hand strengths and weaknesses

3. Have developed an ability to exercise attacks within the limits of basic footwork and movement, and gained an understanding of the benefits of superior positioning

4. Have developed a basic understanding of when it is appropriate to retreat and the possible dangers associated with retreat

5. Have started to develop a sense of distance and timing

6. Have gained a basic idea of how to use the knife to defend against kicks and punches

7. Have acquired a basic understanding of the physics of the stab versus the slash and the dynamics of motion and penetration depth

FIGHTING STANCE

Before exploring let's take a few minutes and talk about stance. When training in empty-hand martial arts, even if training with the intent to develop both sides of your body equally, you probably favor fighting from a stance that places either your strong or weak side forward. If training for speed, you will generally fight with your strong side forward; that is, your right side if you are right-handed, and your left side if you are left-handed. We tend to see this in karate point sparring competitions. If training for power, you will generally fight with your strong side to the rear. We see this in full-contact martial arts such as boxing and kickboxing. In knife fighting, with few exceptions, you will want to place your strong side forward. The rear hand power principle doesn't apply, as it does in full-contact empty-hand martial arts, because the knife is a touch weapon that can do damage without a great deal of power behind the blow. It is therefore recommended that you place the knife in your lead hand for reach and speed. Additionally, placing the knife in your lead hand presents your opponent with a credible threat and minimizes the risk of exposing your empty hand as a target to his or her counterattack.

Although it is not always possible to dictate which stance to fight from and in which hand to hold the knife, a good rule of thumb when starting out is to train with the knife in your lead hand. If you are right-handed, fight with your right side forward; if you are left-handed, fight with your left side forward. Image source: Martina Sprague.

Once you have deployed the knife, keep it at a slight diagonal angle in front of your centerline, elbow down and the knife hand slightly extended toward your opponent. This stance presents a credible threat, and also gives strength to your arm, minimizing the risk of your opponent pushing your forearm back against your own body or trapping your free hand with your knife hand. Note that holding the knife in your lead hand shields your body against your opponent's attack. If the knife is in your rear hand, the opposite is true. You might also inadvertently trap your weapon hand with your free hand.

As when sparring in your empty-hand martial art, you want to keep your legs slightly bent and the heel of your rear foot slightly off the ground to allow it to act as a trigger for forward movement. Note that a low stance (type low horse) generally gives you less mobility and is not recommended; however, it could prove beneficial as a transitory stance when avoiding an opponent's blow, or in preparation for striking a low target on the legs.

As you probably know from your martial arts studies, and especially from sparring practice, most combat situations are dynamic. An opponent who stays in the same spot is easier to strike than an opponent who moves a lot and changes the distance and angle frequently. Exceptions exist. For example, an opponent who is much bigger than you can sometimes afford to use linear movement or dominate the fight through sheer size and strength. This is also why martial arts contests are often held in weight classes. Your strikes will generally not have as great effect on such an opponent as on a smaller fighter. The same is not true in knife combat, where the knife is the equalizer for size and strength. A big knife makes the smallest warrior mighty. But even a small knife has great capacity to intimidate and enhance the martial arts skills you already know.

With the foregoing in mind, and as you begin to learn about knife fighting stance, whether you are armed or not, a fight is dynamic and a stance is not meant to be stationary. You can practice a stationary stance in front of the mirror to ensure that you are combat ready and protecting your vital areas. But the scenario will quickly change the moment you engage in partner practice, particularly if you use a marker or training knife smeared with lipstick to give you a definite indication of the cuts you incur.

Some fighting stances are improper and hinder mobility. An example may be a stance that is too square and leaves your centerline exposed. Although a stance that is slightly low may give you better stability and protection, a stance that is too low or wide stifles movement. What is too low? You need to experiment to find a stance that feels comfortable to you. However, if you are used to very low stances from your traditional hard style of karate, for example, you might need to work on changing your stance a bit so that it facilitates speed and movement. Use these guidelines when evaluating your knife fighting stance:

1. Your stance should allow you to answer a threat from any angle or direction and require no awkward or large movements. You should not have to reach for your target. Your stance should allow you to protect your vital areas, primarily your neck and centerline.

2. Your stance should feel natural, not too deep or wide and not too narrow or crossed. Placing your feet about shoulder-width to shoulder-width and a half apart is a good guideline, which roughly corresponds to the distance you normally keep between your feet when walking. Place equal weight on both feet and keep your knees slightly bent to facilitate balance and ease of movement.

3. Pointing your lead foot straight ahead, as would a sport fencer, will facilitate balanced footwork and speed. If you point your lead foot at a forty-five degree angle to the front corner, as is often seen in the boxer's stance, a quick linear attack will be more difficult to execute.

4. Hold the knife at a comfortable height in front of your chest. You shouldn't have to lift the knife high or strain your shoulders in order to keep it in the proper position. Avoid holding the knife low by your waistline, as this might leave you unable to

protect your vital areas, primarily your heart, neck, and face. Also rely on your free hand for protection.

5. Hold the knife approximately a foot in front of your body. If the knife is held very close to your body, you might inadvertently give your opponent an opportunity to pin your knife hand to your body and render your offense useless. By contrast, if you extend the knife away from your body before you are ready to attack, you risk losing the element of surprise and will have less flexibility in using the knife offensively.

6. Keep your elbow down to protect your centerline and sides of body. Stay on the ball of your rear foot and use this foot to push off for a quick advance. Quick footwork does not depend on your lead foot stepping and pulling the rest of your body forward, but on the power of your rear foot pushing against the floor.

7. Keep your body upright. Leaning may jeopardize your balance, speed, and ability to advance, retreat, or change direction. Your free hand should act as a guard through all movement, especially to protect your neck.

LEAD OR REAR HAND

Historically, a fighter using a long weapon designed for thrusting used a stance that placed the weapon hand forward, increasing his reach and therefore his safety. The greater reach afforded the lead hand is also commonly used with shorter blades, but using the rear hand is still a possibility that should not be overlooked. Using a smaller weapon that is properly weighted for thrusting and slashing attacks gives the martial artist several options in stance and footwork.

By holding the knife in your lead hand, you force the opponent to deal with the threat before he or she attempts a counterattack. This need to defend himself might prove enough to make him abandon the assault. By holding the knife in your rear hand, by contrast, you gain opportunities for using your lead hand to set up, distract, or parry the opponent's attack prior to launching your offense. A disadvantage is that your opponent perceives a lower threat and may therefore not be as keen on abandoning the fight before blood is shed. You also present him or her with an opportunity to trap or grab your lead arm, and by gaining control of that arm ultimately gaining control of the rest of your body and thus the fight. Here is a quick summary of lead and rear hand strengths and weaknesses that you might want to keep in mind when starting with partner practice:

Lead Hand Strengths

1. Knife hand primary threat to opponent

2. Greater reach

Lead Hand Weaknesses

1. Lead hand vulnerable to attack
2. Easier to disarm

Rear Hand Strengths

1. Easier concealment of weapon
2. Use of lead hand (empty hand) to set up attack

Rear Hand Weaknesses

1. Lack of reach with the weapon
2. Lead hand (empty hand) vulnerable to grab or trap

Whether you place your weapon hand or empty hand forward is not a hard and fast rule but, as already mentioned, in general you

should strive toward placing your weapon hand forward. In the chaos of an attack, you might also end up the way you end up and be forced to make the best of it regardless of which hand that is forward. You might have an opportunity (or be forced) to switch stance or switch hands after you have executed the first cut. You are ultimately going to apply your knife training to the particular style of empty-hand martial art you have studied. When choosing your knife fighting stance, ask the following questions and experiment to find the answer that is most appropriate for you depending on your comfort zone and your style of martial art:

1. When applying knife training to your particular style of martial art, what are the benefits of placing the knife in your lead versus rear hand? What are the drawbacks?

2. If you hold the knife in your rear hand, how can you use your lead hand as a distraction, parry, or strike?

3. If you hold the knife in your lead hand, how does it become a target for your opponent's counterattack? What types of techniques in your particular style of martial art can you expect to see as defense against a knife attack?

4. How do the benefits of the stance you choose change if your opponent is also armed with a knife?

5. How can you use a hand change to gain reach on your opponent without giving him or her an opportunity to disarm you? For example, if the knife is in your rear hand, a quick change to your lead hand might give you several feet of additional reach. Experiment.

6. What type of stance gives you the greatest mobility while allowing you to protect your vital areas, primarily your neck? Consider linear, lateral, and circular movement as appropriate to the particular style of martial art you study.

You may not want to draw your knife or assume a fighting stance in the early stages of a threat, until you get a better feel for how the situation will develop. But once you do so, it is recommended that you hold the knife in your lead hand regardless of whether you use a forward or reverse grip, as seen in these photos. Image source: Martina Sprague.

You will gain greater insight into what works and what doesn't when training with a live partner and incorporating movement and realistic time into the training. For example, try different postures

with the knife in the forward and reverse grip. Make sure you are aware of your vital areas at all times and use your empty hand to protect these areas. When you have gained some familiarity with different postures, practice the stabbing and slashing moves you have learned in previous books of the *Knife Training Methods and Techniques for Martial Artists* series, adjusting the position of your free hand accordingly.

On the superiority of arms: Weapons, also referred to as "arms," are anything that can be used to extend your reach and aid your combat efficiency. A knife or a stick, for example, extends your reach by a few inches or a few feet. A bullet is also an arm; although, once fired you no longer maintain physical contact with it. In general, an armed attacker or defender has the advantage over an unarmed opponent.

BASIC MOVEMENT AND FOOTWORK

Movement and footwork are used to give you superior positioning over your opponent, aiding your safety and accuracy with the weapon. Movement and footwork allows you to take advantage of opportune moments in timing when your opponent is in a transitory stance between attack and defense. When starting to learn about knife fighting footwork, get in the habit of advancing rather than retreating from a neutral stance. This allows you to assume a fighting stance with your strong side and knife hand forward. Advancing rather than retreating also allows you to seize the initiative psychologically, giving you mental superiority over your opponent.

Furthermore, if forced to backpedal when under attack, you will be too occupied trying to maintain balance, or too concerned with what might be behind you that you may be unable to launch an effective counterattack. Humans are made primarily for moving forward, so when moving back you will likely be too slow to maintain a safe distance that is appropriately timed to your opponent's advance. To evaluate this theory further, do some knife on knife training with a partner. Have him or her advance aggressively with the knife, while you attempt to defend with your knife. While it is easy to talk about target accuracy or sidestepping an attack, when practiced in real time, you will find that techniques designed at the drawing table are often not what reality is about. The person who gets cut first in this scenario is

likely the person who is retreating. Trying to intercept your opponent's violent attack without taking a cut is easy to talk about but difficult to do.

Now, if you set up an unequal scenario where only you have a knife, you will find that your opponent will be more cautious about charging in. As a result, you may be able to use an intercept technique and succeed even if you are backpedaling. Note that if your opponent is armed and you are not, you may have to retreat initially to give yourself some distance from his weapon and avoid getting cut. It should go without saying that you should use dull training knives and appropriate protective gear in all partner practice exercises.

As mentioned previously, when advancing with the knife, initiate a step forward by pushing off with your rear foot. This helps you advance at a quicker pace because the rear leg propels the body forward. However, be aware that although the rear foot starts movement by pushing off against the ground, the rear foot does not actually step first. The job of the rear foot is to overcome the inertia by pushing off against the ground. By keeping your steps small you further reduce the risk of widening your stance and hindering mobility.

When retreating, push off with your lead foot first, moving that foot toward your rear foot before moving your rear foot back. A retreat is generally undertaken when you need to get away from your opponent's counterattack; it is done primarily for safety, as when your opponent suddenly seizes the initiative. As your opponent advances, you must be particularly careful with exposing targets that are within easy reach of his or her advance. Thus, if you start your retreat by taking a big step back with your rear foot first, you will potentially expose your lead leg to a cut by your opponent's knife. You may also expose your lead leg to a

kick or sweep designed to take you off balance in preparation for a disarming technique. When moving, be aware of your opponent's counterattack and strive to get in the habit of exposing as few targets as possible.

Gaining the upper hand in a fight, whether empty hand or armed, is frequently about superior positioning, or positioning to gain access to numerous targets while limiting your own target exposure. When you have practiced advancing and retreating in a linear fashion, practice stepping at a slight angle forward, and preferably toward your opponent's back. Observe targets that become available as you change your position. For example, you might find that a stab to the kidney or a slash to the tendons behind the knee is ideal. Immediately upon attaining a superior position, attack a suitable target and then angle out (take up a ninety degree angle to your opponent's attack line, where you no longer are in the line of fire for a possible counterattack). Be aware of the distance between you and your opponent when angling out. Unless your goal is to get away at this point, you must be within easy reach to attack a new target before your opponent has changed his position, provided that he or she is still capable of attacking you.

When moving in for an attack to your opponent's body or neck whether linearly or at an angle, you must get past his or her knife-wielding hand safely. Remember from our previous studies that the danger is in his hand(s) because this is where the knife is. To avoid engaging in a sparring match or exchange of blows with your adversary, this danger must be dealt with first before you can attack a primary target. Try this:

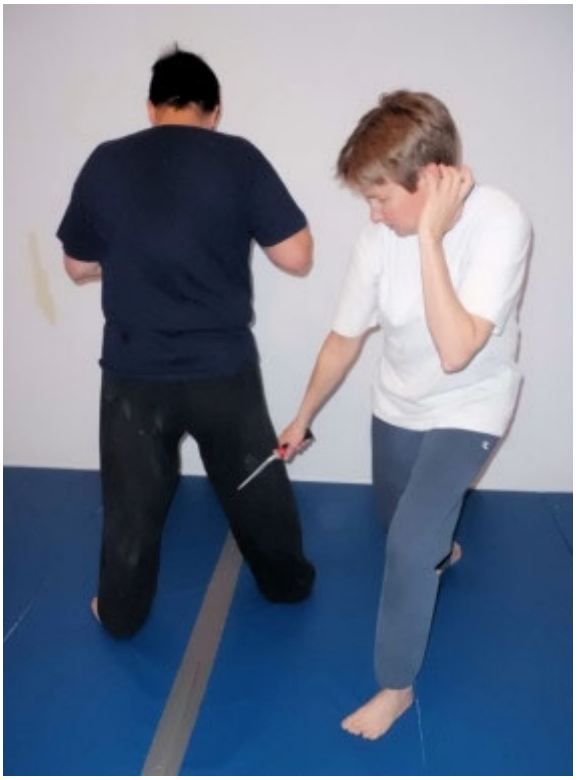
1. Remain at safe distance with the knife in the forward grip in your lead hand.

2. Take a quick step forward as you extend the weapon and slash your opponent's hand, then step back to a safe distance quickly.

3. As soon as you have determined your opponent's reaction—did he get stunned or withdraw his hand?—step forward and slash his hand anew, and immediately take a lateral step forward to a superior position slightly toward his back. When moving forward, do so in a wedge-like fashion instead of a straight line. Linear footwork may make you more vulnerable to your opponent's counterattack, especially if he, too, is armed with a knife.

4. Attack a primary target, such as the neck or kidney, and angle out and away from the line of fire.

Keeping your distance while taking a quick swipe at your opponent's knife-wielding hand can get you the reaction you need to move forward and into a superior position for an attack to a primary target. Image source: Martina Sprague.



When you have attained the superior position toward your opponent's back, a cut to the tendons behind his knee can prove viable for taking him down and ending the fight. Image source: Martina Sprague.

WHEN YOU MUST RETREAT

A reason why disarming techniques seem to work so well in the typical martial arts training hall is because there is generally not a whole lot of movement and speed involved. In other words, the attack is predictable, slow, and stationary. The more you move, or the more you move the weapon, the more unpredictable you become. But staying mobile is not the same as using large or exaggerated moves that are easily telegraphed and use up energy. When you move, move with a purpose. Move to gain a better position, to confuse and intimidate your opponent, or to seize the initiative by forcing him or her to react to your movement.

Moreover, it is easy to get so absorbed in the weapon that you forget most of what you have learned in your empty-hand martial arts training. To break this habit, start by practicing your knife skills in conjunction with normal movement and footwork, the type of footwork you would use in a sparring session for beginners. For example, advance or retreat one small step at a time while getting a feel for distance. As you get more comfortable, try sidestepping an imaginary attack or pivoting away from the attack line while attacking an imaginary target with a stab or slash. Here are some more tips for practicing movement and footwork:

1. Remain in your stance, keeping the knife in your lead hand throughout all movement. Do not cross your feet.

2. Initiate movement by pushing off with your rear foot when advancing. When retreating, push off with your lead foot. However, be aware that if you start a retreat by withdrawing your lead foot, your stance will be narrow for a moment until you move your rear foot to reset the width of your stance.

3. Determine how to avoid exposing your hands and wrists, forearms, lead leg, centerline, and neck to a possible counterattack. If your opponent also has a knife, your primary defensive concern is to avoid getting cut. If your opponent is empty-handed, your primary defensive concern is to avoid getting disarmed.

If at all possible, avoid crossing your feet when practicing movement and footwork. Crossing your feet places you in a

potentially unstable stance and may complicate further movement. Image source: Martina Sprague.

Ideally, then, when attacking with the knife strive to be the aggressor. But be aware that there are times when it benefits you to take a step to the rear; for example, when your opponent also has a knife or other weapon, or when you get wounded and need to switch your grip or knife hand. Since switching grip or hand requires time and puts you at risk of inadvertently dropping the knife, a step to the rear might give you the extra protection you need to execute the switch safely. It is not suggested that you retreat if you are otherwise successful, but rather that you use a retreat to give yourself the time and distance you need to maneuver the knife into position while avoiding your opponent's counterattack. Keep in mind that if you are able to retreat, you might also be able to escape the situation altogether.

When retreating or switching hands, hold the knife along your centerline and point it at your opponent. This allows you to continue to pose a threat throughout the maneuver while protecting your vital areas. Avoid wide or exaggerated moves with your arms. Short moves rather than large circles are quicker and have greater potential to deceive your opponent. A step to the rear may also assist you in changing direction in anticipation of a second attacker. For example, if an empty-handed assailant approaches you from behind, a step to the rear simultaneous with a turn of your body toward the attacker can help you distance yourself from the first attacker, while placing you in position to deal with the second attacker. Remember that these are training exercises designed to help you analyze footwork and knife movement in combination. NO ATTACK OR DEFENSE IS FOOLPROOF. Furthermore, you don't necessarily know what type of weapon (if any) your opponent is carrying.

MOVEMENT WHEN DEFENDING AGAINST KICKS AND PUNCHES

When attacking with the knife you will likely be aiming for an opponent in front of you or slightly to the side. If there is a need to attack somebody behind you, with few exceptions you must detect the threat first and then turn toward your adversary. An exception may be if he or she has grabbed you in a rear bear hug, for example, and is not aware that you are wielding a knife. Footwork should therefore be used in combination with your attack.

Historical Gem: Col. Rex Applegate, a recognized authority on armed and unarmed close quarter combat, believed that a surprise attack from the rear had no useful defense and was therefore highly effective, so long as one's advance was not discovered. He held the view that the attack should be carried out by approaching the enemy from the rear, covering his mouth with one hand to prevent noise, simultaneously pulling him backward and off balance. The knife should then be thrust into the kidney to cause immediate shock. See Col. Rex Applegate, *Kill or Get Killed: For Police and the Military Last Word on MOB Control* (Boulder, CO: Paladin Press, 1976), 80-82.

If you fail to judge the distance correctly and fail to step within reach of your target, you will miss when you attack. You will also risk getting countered particularly as you withdraw your hand in preparation for a new attack. By using footwork in combination with stabbing or slashing, you avoid increasing the distance

between yourself and your adversary when withdrawing the knife, and decrease the risk of getting countered during this vulnerable phase. The idea is to seize and maintain the initiative; to constantly stay a step ahead of your adversary. Proper use of footwork prevents you from overreaching when attacking with the knife. Try the following training steps with a partner:

1. Strike from position.
2. Step forward with the lead foot and strike.
3. Step forward with the lead foot, then the rear foot and strike.
4. Step back with the lead foot and strike.
5. Step back with the rear foot and strike.
6. Step back with the lead foot, then the rear foot and strike.
7. Step to the side with the lead foot and strike.
8. Step to the side with the rear foot and strike.

If forced to retreat, make an attempt to attack with the knife simultaneously. Or break the rhythm by stalling your attack momentarily while taking a step back to draw your opponent forward. The moment he moves, take a half step forward and attack. The principle is the same as in empty-hand martial arts where you attempt to meet your opponent's momentum. In empty-hand martial arts, a straight technique such as a jab, front kick, or sidekick, often proves faster than a circular technique, such as a hook punch, roundhouse kick, or spinning hook kick, because a straight line beats a circle. However, remember that your physical strength plays only a small role when armed with a knife.

Next, experiment with getting past your opponent's blocking arm. Although your opponent risks taking a cut to his arm, it will likely not prove lethal and may not even break his or her

momentum. When moving in on an unarmed opponent, however, you have the upper hand, but must still guard against a disarming attempt. Your move should be swift. To avoid giving your opponent an opportunity to disarm you, do not extend your knife hand prematurely.

If you have to use the knife against an unarmed attacker, many of the same principles apply. For example, you want to seize the initiative and the superior position. If your opponent initiates with a kick, rather than trying to avoid the attack, close the distance and block with the knife or, if possible, sidestep the attack and counter with the knife to a vital target, such as the femoral veins on the inside thigh.

The femoral veins on the inside thigh area is a good target if your opponent throws a looping kick, such as a roundhouse kick that exposes this target. Image source: Martina Sprague.

Your attacker may not know that you have a knife. If he throws a roundhouse kick, you can either catch the kick in the crook of your arm while simultaneously moving in. You now have command of your opponent's attacking weapon (his leg) and also his balance. With the knife in your other hand, stab into the femoral vein on his inside thigh. If this technique doesn't end the fight, it will at least afford you the opportunity to attack another primary target, such as your opponent's midsection or neck.

If your opponent's kick is aimed at the side on which you carry the knife, however, it will not prove practical to catch his leg in the crook of your arm. But by moving forward at the initiation of his kick, you can still neutralize the power by taking the kick on your outside arm. While your opponent is still on one leg, immediately take another small step forward and stab or slash a vital target. As you can see, the fight should be over within seconds of your opponent launching his attack, which reinforces the idea that knife fighting is not like a sparring match where you stand toe-to-toe and exchange blows.

So what about using the knife to defend against a punch? In a street encounter, you will probably not face a trained boxer. The attacker is more likely to attempt to pound you to the ground with alternating right and left strikes. If he is right-handed, he will probably initiate the attack with his right hand. If the punch is obvious, you can intercept it with a quick slash to his wrist or forearm. Your free hand can be used as a back-up to parry your opponent's arm out of the way. As soon as the first slash lands, move forward with additional slashes or stabs. If the punch comes quickly and is more difficult to time, push your chin toward your chest and cover the sides of your head with your arms. This may enable you to protect against the punch without

incurring significant damage. As soon as the punch has landed on your arms, step toward your opponent's centerline. Once you are inside of his technique, initiate a series of quick slashes to a vital target such as the neck while simultaneously pushing him to the rear. Even if you cannot see the target, a quick move with your knife hand in a tight hooking motion is almost certain to do damage at close range, particularly if holding the knife in the reverse grip.

When slashing with the knife, you don't need to rely on full body pivots as you would when striking empty handed. The knife is a lightweight weapon with a strong capacity to do damage even with very light contact. Full body pivots would also slow you down in the reversal of motion for a second slash or stab, and put you at risk of exposing targets to your opponent's counterattack.

Historical Gem: In the military, close quarter combat with the knife has historically been practiced primarily to prepare the recruit for an encounter where he for some reason becomes unarmed. He would then attempt to wrench an enemy combatant's weapon from his hand by relying on techniques, such as punching and kicking, designed to stir up chaos and buy him time. See Stephen Bull, *World War Two Infantry Tactics: Squad and Platoon* (University Park, IL: Osprey Publishing, 2004), 19-20.

LUNGING EXERCISE

Ultimately, you can fight at long range or short range or a combination of both. If your opponent is armed, long range might prove the better alternative at first. Start by attempting to cut his knife hand to make it unusable, while staying at long range to avoid taking cuts from his counter-attempt. The longer or bigger your knife is, the greater your advantage at this range. If you must go to close range against an opponent wielding a knife, a slightly smaller weapon that is easier to maneuver in the reverse grip may give you some advantages. When training to close the distance, take many small steps instead of one big lunge. Smaller steps help you control your footwork and correct mistakes easier. It also prevents you from losing balance. Do not cross your feet. However, if you have lunged at your opponent and your stance is slightly wide, bringing your lead foot back into the so-called cat stance allows you to set your weight over your rear foot while moving your upper body and lead arm away from your opponent's counterattack. It also gives you the option of "falling forward" into a new attack quickly. All moves should be smooth with no hopping or swaying of the body. Now, then, that you have practiced advancing and retreating in small steps, try these attack variations:

1. A quick forward lunge and retreat with a stabbing attack with the knife in the lead hand.

2. A quick forward lunge and retreat with a slashing attack with the knife in the lead hand.

3. A quick and short sidestep forward (wedge) with the knife in your lead hand and an inward slashing attack, followed by an outward slashing attack.

4. A quick forward lunge and a downward slash while dropping your weight.

5. A diagonal upward slash to the thigh from a low stance.

Practice with a partner. Advance in small steps while he or she retreats in small steps with his guard up. When he drops his guard and invites an attack, lunge with a stab or slash and then retreat quickly.

As you proceed with these exercises, remember that looking into your opponent's eyes might stall your attack. Throughout battle history, including the martial arts, it has generally been recommended to fix your sight on the enemy's chest and thrust your knife, sword, or bayonet there.

THE PHYSICS OF THE STAB AND SLASH

Before moving on to study various basic and dynamic defenses against knife attacks in coming books of the *Knife Training Methods and Techniques for Martial Artists* series, it is appropriate to talk a bit about the physical principles that apply, and how to maximize the power of each attack and the cutting ability of differently designed blades.

History has taught wielders of edged weapons about the superiority of the thrust over the slash. Whereas a slash draws blood, a thrust kills. (A slash can kill, but it generally takes longer.) Soldiers wielding edged weapons on battlefields learn that a stab to a vital target such as an organ often proves fatal. It also proves difficult to prevent infection from occurring in puncture wounds, even if the soldier does not die of the initial stab. A drawback is that a stab, with a dagger-type fighting knife, for example, requires greater precision than a slash, which can cover a large target area. Although the forward grip, which is commonly used when stabbing, can increase your reach by several inches, a penetrating stab that goes deep enough to truly end the fight also requires you to be as much as a foot or two closer to your adversary, than a slash, for example, aimed at the blood vessels in the neck. A stab is also more difficult to execute when significant movement is involved.

Slashes, by contrast, require less precision and seem to benefit the natural kinematics of the human body; however, a slash that

is not aimed at a major blood vessel will seldom result in immediate death. Moreover, a slash will possibly reach only the adversary's extremities such as his hands and will unlikely prove lethal. The most important objective in a knife fight is not necessarily instant death, however, but the incapacitation of the enemy. Another benefit of the slash is that it is generally quicker following the draw of the knife at very close range. The draw and first cut can also be combined into a single move relying on the natural movement of the wielder's arm. Consider the martial sword art of which focuses on drawing the weapon and executing the first slash with a single move.

Historical Gem: In swordsmanship, the swordsman commonly carries his weapon on the left side of the body if he is right-handed. This allows him to draw the weapon with his strong hand in a cross-draw. The cross-draw is beneficial because the sword is drawn across the practitioner's centerline, along which his center of strength and balance are focused. The cross-draw requires less energy expenditure through the first cut. However, the same is not necessarily true with a short sword or knife, which can be drawn comfortably also from the right side if one is right-handed. Furthermore, to avoid losing balance when drawing and executing the first cut, the swordsman must keep his center of gravity above his foundation. The risk of losing balance is greatest when the wielder misses the target (assuming that he is fully committed to the attack), and is more pronounced the longer the weapon is. The soldier on the battlefield has historically realized that the use of a big knife, through its greater reach, often translated into safety. He could cut while avoid getting cut. Big knives also provided power through weight, which translated into ability to do significant damage or kill the adversary with a single blow.

As explained in Book 1 of the *Knife Training Methods and Techniques for Martial Artists* series, an edged weapon designed primarily for slashing, such as a Samurai sword, has a curved edge. An edged weapon designed primarily for stabbing, by contrast, such as a bayonet, has straight edges or edges with a slight taper toward the tip. Whether curved or straight, whenever a blade is thrust into the target, all power is focused in the point and over the width or cross-sectional area of the blade. In comparison to a straight blade, and in proportion to the extent of the curve, a curved blade loses some of its power when used in a thrusting attack. This is why: If you view a curved blade from the tip and straight down the blade, you will see a greater cross-sectional area than on a straight blade. The curved blade must therefore "cut away" more flesh in order to penetrate deep into the target and do lethal damage. More force must be exerted into the thrust, which is a reason why a curved blade doesn't work as well as a straight blade in a thrusting attack.

You might remember from your physics classes the principle of force per square inch. The more concentrated the force, the greater it is. A single-edge knife with a tip that curves up is therefore capable of producing severe damage on the backstroke (when you pull the knife back toward you after executing a stab), as compared to a double-edge knife where the cutting edges come together evenly in a point at the tip, which has its greatest power potential in a straight stab. The reason why the single-edge knife with the upward curved (concave) tip proves so effective on the backstroke is because the power is focused into the point at the tip versus over the whole cutting area of the blade.

If wielding a knife designed primarily for chopping, your power comes from the amount of force behind the blow, and is due

partly to good fighting mechanics, and partly to the design of the knife, its leverage and weight. For example, the power of a chop with a dagger held in the ice pick grip is increased when you allow your weight to fall with the weapon toward the target. A chop with a machete or the broad-bladed kukri that is specific to the Gurkhas of Nepal is also increased when you place your weight behind the blow. The kukri has much of its weight toward the tip of the blade, which balances the knife so that you can deliver great force with little effort. A drawback is that if you miss, because of the placement of the center of mass of the knife, you risk placing yourself off balance, which will complicate withdrawing the knife and readying it for a new attempt. The strength and length of the machete or kukri also give you leverage and allow you to deliver devastating blows.

A tall person can generally carry and wield a big knife with greater efficiency than a smaller person not because of a physical strength advantage, but because a big knife carried by a small person will likely get in the way of his or her movement. When fighting with a smaller knife, the advantages of a stab over a slash when holding the knife in the forward grip include the following:

1. The stab is faster than the slash, because a straight line generally beats a curved line through shorter distance. (However, slashes with the knife in the reverse grip at very close range can prove exceptionally fast.)

2. The knife wielder derives greater protection when stabbing than slashing, because he or she can keep the elbow down to protect his centerline.

3. The stab is more difficult to detect than the slash (unless the slash is initiated from very close range), because there is less

motion on the lateral plane. The opponent sees only the point coming straight toward him, and not the full length of the blade.

However, a relatively short-bladed knife gives one the ability to choose either a thrust or a slash. A short-bladed knife can prove highly versatile, unpredictable, fast, and intimidating. There is a tradeoff: The shorter the knife, the more deceptive the slash is; the longer the knife, the greater benefit you get from the straight stab.

It is also worthy of note that a slashing attack gives you more options than a stabbing attack. To defend against a slashing attack successfully, you must see it coming from a distance. In other words, the attacker must make an exaggerated move with his arm. What appears to be a straight stab from the forward grip can also be converted quickly into an inward or outward slash. A slash also works well when sidestepping an opponent thus placing you at a more favorable angle in preparation for his or her counterattack. Slashing from very close range may help you protect your vital areas better, because there is less obvious commitment and tighter moves. Try a slash as defense against your opponent's stab. The moment he or she commits to the stab, stay slightly out of range and slash his hand or arm. A slash requires less precision than a stab, which relies on striking the target with the tip of the blade. The slash is likely to strike a target even if not aimed at anything in particular, simply because it covers a greater area.

THE PHYSICS OF MOTION AND PENETRATION DEPTH

As already a big knife has the benefit of good reach. The longer the weapon is, the greater the linear speed at the tip, which means easier target penetration in a slashing attack. The combination of speed and the sharp and slim cutting edge of the weapon make for a lethal partnership that gave the Samurai, for example, the ability to cut through a human body or completely sever limbs with a single blow, and is based on the same principle that allows a straw of grass to penetrate the trunk of a tree in a hurricane.

Although the greatest speed of the blade is near the tip, when wielding the knife you must consider penetration depth. You should not be so far away that the tip merely grazes the target. Practicing stance and footwork allows you to control the distance, maintain your balance, increase your momentum, and avoid contradictory moves that may split the power in two directions. For example, if you move the knife horizontally to your right, but simultaneously move your body to the left, the power will split because you have failed to place your weight behind the blow. This damaging effect is less apparent in attacks using a short blade that can be manipulated with the strength of your wrist, as opposed to a long blade such as a sword. However, bodyweight behind a technique increases the speed and power through an increase in momentum, and is true for all styles of martial arts. If you desire to execute a downward slash, dropping your weight

slightly with the motion of the blade enables you to use the natural force of gravity to achieve speed and penetration.

Although correct mechanics maximize an edged weapon's impact velocity, the weight of your body is used primarily to accelerate the weapon prior to impact. When deploying edged weapons (which are touch weapons as opposed to impact weapons), the greatest benefit is still derived from speed and kinetic energy. In terms of physics:

Momentum = mass X velocity, or p = mv

Kinetic Energy = 1/2mass X velocity (squared), or KE =

How deeply a knife cuts depends in part on the knife's leverage and weight. The longer the weapon is, the greater the leverage. Leverage further translates into speed at the tip of the weapon, and therefore deeper penetration. A ten-inch blade does give you more striking power than a four-inch blade, but if the blade is too long, the knife becomes cumbersome to handle, balance, or accelerate. The speed at the tip of a knife that is swung in an arc increases in proportion to the length of the blade, even as the speed of your hand movement remains constant. In other words, the tip of a long weapon will travel through the same number of degrees in an arc as the tip of a short weapon at a given speed at the hub of rotation (your hand). The tip of a long weapon therefore travels faster than the tip of a short weapon, and can therefore produce greater potential damage in a slashing attack.

For more information about using the principles of physics in martial arts, it is suggested that the reader picks up a copy of *Fighting Science: The Laws of Physics for Martial* also by Martina Sprague.

Thought provoker: How much does a twenty-dollar knife cost? Twenty dollars, right? How much penetration can you get with a four-inch blade? Four inches, right? Wrong! If your attack is done with proper intent, you will likely get considerably more than four inches when attacking soft tissue areas such as the abdomen. As the knife stabs through the target, this soft tissue will "give" (be pushed back, or compressed if you will), allowing the knife to penetrate deeper than four inches, perhaps as much as six inches, even though the blade is only four inches long.

To summarize, the knife is extremely dangerous and versatile, and in the hands of a skilled wielder capable of cutting or stabbing several times within seconds. The knife is therefore difficult to stop or defend against and causes severe trauma. It is also capable of producing injury both going in and out of the target. The knife is capable of deep penetration, deeper than the actual length of the blade, because of the compression of soft tissue in the body. If you use the knife offensively, consider which targets will end the fight quickest. The major blood vessels in your opponent's neck, wrists, and femoral veins are good targets, as are the organs in the midsection and back (kidneys). The objective of footwork and movement is to give the martial artist/knife fighter the opportunity to seize the initiative and take control of the fight.

About the author:

Martina Sprague is a military historian and martial artist. She has studied the martial arts since 1987 and holds black belts in Kenpo karate, kickboxing, and street freestyle. She is the author of numerous martial arts and military history books. For more information, please visit her Web site: www.modernfighter.com.